

Table 1. Summary of Semivolatile Organic Compounds in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

Analyte	Sample Designation:			CFBR-01	CFBR-01	CFBR-02	CFBR-03	CFBR-CS-01	CFBR-CS-02	CFPR01-BF-01
	Sample Date:			3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/9/2017
	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Sample Type:	FD	N	N	N	N	N	N
1,1'-Biphenyl	--	0.083	ug/l	0.63 U	0.64 J	0.76 J	0.63 U	0.63 U	0.63 UJ	1.2 J
1,2,4,5-Tetrachlorobenzene	--	0.17	ug/l	0.43 U	0.43 UJ	0.43 U				
1,4-Dioxane	--	0.46	ug/l	3.1 U	3.1 UJ	3.1 U				
2,2'-oxybis[1-chloropropane]	--	--	ug/l	0.93 U	0.93 UJ	0.93 U				
2,3,4,6-Tetrachlorophenol	--	24	ug/l	0.69 U	0.69 UJ	0.69 U				
2,4,5-Trichlorophenol	--	120	ug/l	0.49 U	0.49 UJ	0.49 U				
2,4,6-Trichlorophenol	--	1.2	ug/l	0.53 U	0.53 UJ	0.53 U				
2,4-Dichlorophenol	--	4.6	ug/l	0.63 U	0.63 UJ	0.63 U				
2,4-Dimethylphenol	--	36	ug/l	0.91 U	0.91 UJ	0.91 U				
2,4-Dinitrophenol	--	3.9	ug/l	2.4 U	2.4 UJ	2.4 U				
2,4-Dinitrotoluene	--	0.24	ug/l	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U
2,6-Dinitrotoluene	--	0.049	ug/l	0.88 U	0.88 UJ	0.88 U				
2-Choronaphthalene	--	--	ug/l	0.61 U	0.61 UJ	0.61 U				
2-Chlorophenol	--	9.1	ug/l	0.74 U	0.74 UJ	0.74 U				
2-Methylnaphthalene	--	3.6	ug/l	0.88 UJ	4.4 J	4.2 J	1.4 J	9 J	0.97 J-	12
2-Methylphenol	--	--	ug/l	1.3 U	1.3 UJ	1.3 U				
2-Nitroaniline	--	19	ug/l	0.65 U	0.65 UJ	0.65 U				
2-Nitrophenol	--	--	ug/l	0.59 U	0.59 UJ	0.59 U				
3 & 4 Methylphenol	--	--	ug/l	0.88 U	0.88 U	0.88 U	0.88 UJ	4.2 J	0.88 UJ	0.88 UJ
3,3'-Dichlorobenzidine	--	0.13	ug/l	1 U	1 U	1 U	1 U	1 U	1 R	1 U
3-Nitroaniline	--	--	ug/l	0.82 U	0.82 UJ	0.82 U				
4,6-Dinitro-2-methylphenol	--	--	ug/l	2 U	2 U	2 U	2 U	2 U	2 UJ	2 U
4-Bromophenyl phenyl ether	--	--	ug/l	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U
4-Chloro-3-methylphenol	--	--	ug/l	0.76 U	0.76 UJ	0.76 U				
4-Chloroaniline	--	0.37	ug/l	0.73 U	0.73 UJ	0.73 U				
4-Chlorophenyl phenyl ether	--	--	ug/l	0.96 U	0.96 UJ	0.96 U				
4-Nitroaniline	--	3.8	ug/l	0.48 U	0.48 UJ	0.48 U				
4-Nitrophenol	--	--	ug/l	4.7 U	4.7 U	4.7 U				

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Compound	Conc. ug/l										
Acenaphthene	--	53	ug/l	0.88 U	0.88 U	1.1 J	1.1 J	0.88 U	1.2 J	1.3 J	
Acenaphthylene	--	--	ug/l	0.65 U	0.65 UJ	0.65 U					
Acetophenone	--	190	ug/l	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	
Anthracene	--	180	ug/l	0.57 U	0.57 UJ	0.57 U					
Atrazine	3	0.3	ug/l	0.77 U	0.77 UJ	0.77 U					
Benzaldehyde	--	190	ug/l	0.86 U	0.86 U	0.86 U	2 J	0.86 U	0.86 UJ	0.86 U	
Benzo[a]anthracene	--	--	ug/l	0.55 U	0.55 UJ	0.55 U					
Benzo[a]pyrene	0.2	0.0034	ug/l	0.16 U	0.16 UJ	0.16 U					
Benzo[b]fluoranthene	--	0.034	ug/l	0.44 U	0.44 UJ	0.44 U					
Benzo[g,h,i]perylene	--	--	ug/l	0.75 U	0.75 UJ	0.75 U					
Benzo[k]fluoranthene	--	0.34	ug/l	0.18 U	0.18 UJ	0.18 U					
Bis(2-chloroethoxy)methane	--	5.9	ug/l	0.69 U	0.69 UJ	0.69 U					
Bis(2-chloroethyl)ether	--	0.014	ug/l	0.12 U	0.12 UJ	0.12 U					
Bis(2-ethylhexyl) phthalate	5.6	6	ug/l	0.72 U	0.72 UJ	0.72 U					
Butyl benzyl phthalate	--	16	ug/l	0.6 U	0.6 UJ	0.6 U					
Caprolactam	--	990	ug/l	1.1 U	1.1 UJ	1.1 U					
Carbazole	--	--	ug/l	23	17	22	34	24	11 J-	8.4 J	
Chrysene	--	3.4	ug/l	0.67 U	0.67 UJ	0.67 U					
Dibenz(a,h)anthracene	--	0.0034	ug/l	0.09 U	0.09 UJ	0.09 U					
Dibenzofuran	--	0.79	ug/l	0.85 U	0.85 UJ	0.85 U					
Diethyl phthalate	--	--	ug/l	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	
Dimethyl phthalate	--	--	ug/l	0.98 U	0.98 UJ	0.98 U					
Di-n-butyl phthalate	--	--	ug/l	0.82 U	0.82 UJ	0.82 U					
Di-n-octyl phthalate	--	20	ug/l	0.69 U	0.69 UJ	0.69 U					
Fluoranthene	--	80	ug/l	3.6 J	2.8 J	2.6 J	6 J	3.2 J	2.1 J-	0.96 J	
Fluorene	--	29	ug/l	0.8 U	0.8 U	1.2 J	0.8 U	0.8 U	1.6 J-	1.6 J	
Hexachlorobenzene	1	0.0098	ug/l	0.47 U	0.47 UJ	0.47 U					
Hexachlorobutadiene	--	0.14	ug/l	0.76 U	0.76 UJ	0.76 U					
Hexachlorocyclopentadiene	50	0.041	ug/l	0.61 U	0.61 UJ	0.61 U					
Hexachloroethane	--	0.33	ug/l	0.09 U	0.09 UJ	0.09 U					
Indeno[1,2,3-cd]pyrene	--	0.034	ug/l	0.21 U	0.21 UJ	0.21 U					
Isophorone	--	78	ug/l	0.67 U	0.67 UJ	0.67 U					
Naphthalene	--	0.17	ug/l	0.8 UJ	3.3 J	0.8 U	1.3 J	19	0.8 UJ	5.2 J	
Nitrobenzene	--	0.14	ug/l	0.49 U	0.49 U	0.49 U	0.68 J	0.49 U	0.49 UJ	0.49 U	
N-Nitrosodi-n-propylamine	--	0.011	ug/l	0.83 U	0.83 UJ	0.83 U					
N-Nitrosodiphenylamine	--	12	ug/l	0.74 U	0.74 UJ	0.74 U					

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Pentachlorophenol	1	0.041	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 UJ	2.2 U
Phenanthrene	--	--	ug/l	4.2 J	3.2 J	3.4 J	5.8 J	2.5 J	2.7 J-	3.8 J
Phenol	--	580	ug/l	0.41 U	0.41 U	0.41 U	8.2 J	7.1 J	0.41 U	0.41 U
Pyrene	--	12	ug/l	2.2 J	1.6 J	1.4 J	3.3 J	1.7 J	1 J-	0.83 U

J - Estimated value

J+ - Estimated value, high bias

U - Indicates that the compound was analyzed for but not detected

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EPA - Environmental Protection Agency

RSL - Regional Screening Levels

ug/l - Micrograms per Liter

Bold data indicates that parameter was detected above the EPA Residential Soil RSLs

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CFPR01-BF-02	CFPR01-BF-03	CFPR01-BF-04	CFPR01-BW-01	CFPR01-BW-04	CFPR01-GF-01	CFPR01-GF-02	CFPR01-GF-03	CFPR01-GF-04	CFPR01-SS
3/9/2017	3/9/2017	3/9/2017	3/10/2017	3/9/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/9/2017
N	N	N	N	N	N	N	N	N	N
0.72 J	0.63 U	0.63 U	0.63 U	0.63 U	1.1 J	0.63 U	0.68 J	3.3 J	0.75 J
0.43 U	0.43 U								
3.1 U	3.1 U								
0.93 U	0.93 U								
0.69 U	0.69 U								
0.49 U	0.49 U								
0.53 U	0.53 U								
0.63 U	0.63 U								
0.91 U	0.91 U								
2.4 U	2.4 U								
1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
0.88 U	0.88 U								
0.61 U	0.61 U								
0.74 U	0.74 U								
4.1 J+	0.88 U	0.88 U	1.2 J	0.88 U	3 J	1.3 J	5.4 J	25	6.1 J
1.3 U	1.3 U								
0.65 U	0.65 U								
0.59 UJ	0.59 UJ	0.59 U	0.59 U						
0.88 U	0.88 U	0.88 U	0.88 U	0.88 UJ	0.88 U	0.88 U	0.88 U	3.3 J-	0.88 U
1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
0.82 U	0.82 U								
2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
0.76 U	0.76 U								
0.73 U	0.73 U								
0.96 U	0.96 U								
0.48 U	0.48 U								
4.7 U	4.7 U								

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1.8 J	0.88 U	1.6 J	7.4 J	0.88 U					
0.65 U									
1 U	1 U	1 U	1 U	1.3 J	1 U	1 U	1 U	1 U	1 U
0.57 U	7.6 J	0.57 U							
0.77 U									
0.86 U									
0.55 U									
0.16 U									
0.44 U									
0.75 U									
0.18 U									
0.69 U									
0.12 U									
0.72 U	0.72 U	2.2	0.76 J	1.1 J	0.72 U				
0.6 U									
1.1 U									
13	15	6.7 J	4.2 J	1.7 J	84	94	120	77	4.2 J
0.67 U	1.1 J	0.67 U	0.67 U						
0.09 U									
0.94 J	0.85 U	4.3 J	0.85 U						
1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
0.98 U									
0.82 U									
0.69 U									
3.7 J	1.7 J	0.84 J	0.99 J	0.72 U	6.4 J	8.6 J	8.6 J	6.2 J	0.82 J
0.8 U	1.4 J	0.8 U	0.8 U	8.8 J	0.8 U				
0.47 U									
0.76 U									
0.61 U									
0.09 U									
0.21 U									
0.67 U									
3.7 J	0.8 U	0.8 U	0.8 U	0.8 U	1.8 J	1.3 J	9.7 J	32	6.9 J
0.49 U									
0.83 U									
0.74 U	0.74 U	0.74 U	0.74 U	3.1 J	0.74 U				

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2.2 U									
6.6 J	0.99 J	0.65 U	1.2 J	0.65 U	8.2 J	10	11	22	1.7 J
0.41 U									
2.8 J	0.83 U	0.83 U	0.83 U	0.83 U	3.3 J	4.1 J	5.2 J	4 J	0.83 U

Table 2. Summary of Volatile Organic Compounds in Concrete Leachate
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Analyte	Sample Designation:			CFBR-01	CFBR-01	CFBR-02	CFBR-03	CFBR-CS-01	CFBR-CS-02
	EPA Risk Based Screening Level Drinking water MCL	Sample Date:		3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017
		EPA Risk Based Screening Level Tapwater RSL	Sample Type:	FD	N	N	N	N	N
1,1,1-Trichloroethane	200	800	ug/l	0.28 UJ	0.28 UJ	0.28 UJ	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	--	--	ug/l	0.19 UJ	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	5500	ug/l	0.34 UJ	0.34 UJ	0.34 UJ	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	--	--	ug/l	0.08 UJ	0.08 UJ	0.08 UJ	0.08 U	0.08 U	0.08 UJ
1,1-Dichloroethane	--	2.8	ug/l	0.24 UJ	0.24 UJ	0.24 UJ	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	--	--	ug/l	0.34 UJ	0.34 UJ	0.34 UJ	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	--	0.7	ug/l	0.35 UJ	0.35 UJ	0.35 UJ	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	--	0.4	ug/l	0.27 UJ	0.27 UJ	0.27 UJ	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.00033	ug/l	0.23 UJ	0.23 UJ	0.23 UJ	0.23 U	0.23 U	0.23 U
1,2-Dichlorobenzene	600	30	ug/l	0.22 UJ	0.22 UJ	0.22 UJ	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	5	0.17	ug/l	0.25 UJ	0.25 UJ	0.25 UJ	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	0.44	ug/l	0.18 UJ	0.18 UJ	0.18 UJ	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	--	--	ug/l	0.33 UJ	0.33 UJ	0.33 UJ	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	0.48	ug/l	0.33 UJ	0.33 UJ	0.33 UJ	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	560	ug/l	2.2 UJ	9.2 J	5.2 J-	2.2 U	4.2 J	2.2 U
2-Hexanone	--	3.8	ug/l	3.4 J-	4.6 J-	3.2 J-	0.72 U	3.9 J	0.72 U
4-Methyl-2-pentanone (MIBK)	--	630	ug/l	1.1 J	2.4 J	1.9 J-	1.9 J	1.5 J	0.63 U
Acetone	--	1400	ug/l	32 J	60 J	34 J-	23	28	9.9
Benzene	5	0.46	ug/l	0.81 J	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U
Bromoform	80	3.3	ug/l	0.18 UJ	0.18 UJ	0.18 UJ	0.18 U	0.18 U	0.18 U
Bromomethane	--	0.75	ug/l	0.18 UJ	0.18 UJ	0.18 UJ	0.18 U	0.18 U	0.18 U
Carbon disulfide	--	81	ug/l	0.22 UJ	0.22 UJ	0.22 UJ	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	5	0.46	ug/l	0.33 UJ	0.33 UJ	0.33 UJ	0.33 U	0.33 U	0.33 U
Chlorobenzene	7.8	100	ug/l	0.24 UJ	0.24 UJ	0.24 UJ	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	8.3	ug/l	0.3 UJ	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	80	0.87	ug/l	0.22 UJ	0.22 UJ	0.22 UJ	0.22 U	0.22 U	0.22 U
Chloroethane	--	2100	ug/l	0.37 UJ	0.37 UJ	0.37 UJ	0.37 U	0.37 U	0.37 U

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Chloroform	80	0.22	ug/l	0.22 UJ	0.22 UJ	0.22 UJ	0.22 U	0.22 U	0.22 U
Chloromethane	--	19	ug/l	0.22 UJ	0.22 UJ	0.22 UJ	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	--	--	ug/l	0.26 UJ	0.26 UJ	0.26 UJ	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	--	--	ug/l	0.16 UJ	0.16 UJ	0.16 UJ	0.16 U	0.16 U	0.16 U
Cyclohexane	--	1300	ug/l	0.26 UJ	0.26 UJ	0.26 UJ	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	80	0.13	ug/l	0.15 UJ	0.15 UJ	0.15 UJ	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	--	20	ug/l	0.14 UJ	0.14 UJ	0.14 UJ	0.14 U	0.14 U	0.14 U
Ethylbenzene	700	1.5	ug/l	0.33 J-	0.3 UJ	0.32 J-	0.42 J	0.3 U	0.3 U
Ethylene Dibromide	--	--	ug/l	0.19 UJ	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	ug/l	0.32 UJ	0.32 UJ	0.32 UJ	0.32 U	0.32 U	0.32 U
Methyl acetate	--	2000	ug/l	0.58 UJ	0.58 UJ	0.58 UJ	0.58 U	0.58 U	0.58 R
Methyl tert-butyl ether	--	14	ug/l	0.13 UJ	0.13 UJ	0.13 UJ	0.13 U	0.13 U	0.13 U
Methylcyclohexane	--	--	ug/l	0.22 UJ	0.22 UJ	0.22 UJ	0.22 U	0.22 U	0.22 U
Methylene Chloride	5	11	ug/l	29 J-	34 J-	35 J-	33	77	27
m-Xylene & p-Xylene	--	--	ug/l	1.1 J-	0.81 J-	0.28 UJ	3.1	0.54 J	0.28 U
o-Xylene	--	19	ug/l	0.32 UJ	0.42 J-	0.37 J-	1.8	0.32 U	0.32 U
Styrene	100	120	ug/l	0.17 UJ	0.18 J-	0.32 J-	0.17 U	0.17 U	0.17 U
Tetrachloroethene	--	--	ug/l	0.36 UJ	0.36 UJ	0.36 UJ	0.36 U	0.36 U	0.36 R
Toluene	1000	110	ug/l	2.1 J	0.38 J	0.26 J-	0.4 J	0.35 J	0.25 U
trans-1,2-Dichloroethene	--	--	ug/l	0.18 UJ	0.18 UJ	0.18 UJ	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	--	--	ug/l	0.19 UJ	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U
Trichloroethene	--	--	ug/l	0.22 UJ	0.22 UJ	0.22 UJ	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	--	520	ug/l	0.15 UJ	0.15 UJ	0.15 UJ	0.15 U	0.15 U	0.15 U
Vinyl chloride	2	0.019	ug/l	0.2 UJ	0.2 UJ	0.2 UJ	0.2 U	0.2 U	0.2 U

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3/9/2017	3/9/2017	3/9/2017	3/9/2017	3/10/2017	3/9/2017	3/10/2017	3/10/2017	3/10/2017
N	N	N	N	N	N	N	N	N
0.28 U	0.28 U	0.28 U	0.28 U	0.28 UJ	0.28 U	0.28 U	0.28 U	0.28 U
0.19 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
0.34 UJ	0.34 UJ	0.34 U	0.34 U	0.34 UJ	0.34 U	0.34 U	0.34 U	0.34 U
0.08 U	0.08 U	0.08 U	0.08 U	0.08 UJ	0.08 U	0.08 U	0.08 U	0.08 U
0.24 U	0.24 U	0.24 U	0.24 U	0.24 UJ	0.24 U	0.24 U	0.24 U	0.24 U
0.34 U	0.34 U	0.34 U	0.34 U	0.34 UJ	0.34 U	0.34 U	0.34 U	0.34 U
0.35 U	0.35 U	0.35 U	0.35 U	0.35 UJ	0.35 U	0.35 U	0.35 U	0.35 U
0.27 U	0.27 U	0.27 U	0.27 U	0.27 UJ	0.27 U	0.27 U	0.27 U	0.27 U
0.23 U	0.23 U	0.23 U	0.23 U	0.23 UJ	0.23 U	0.23 U	0.23 U	0.23 U
0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U	0.22 U	0.22 U
0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
0.18 U	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U
0.33 U	0.33 U	0.33 U	0.33 U	0.33 UJ	0.33 U	0.33 U	0.33 U	0.33 U
0.33 U	0.33 U	0.33 U	0.33 U	0.33 UJ	0.33 U	0.33 U	0.33 U	0.33 U
2.2 U	2.2 U	2.2 U	2.2 U	9.5 J-	3.1 J	2.2 U	5.9	2.2 U
0.72 U	0.72 U	0.72 U	0.72 U	4.1 J-	2.3 J	3.8 J	4 J	0.72 U
0.63 U	0.63 U	0.63 U	0.63 U	2.3 J-	1 J	1 J	1.3 J	0.63 U
12	1.1 U	30	20	61 J-	23	33	36	35
0.19 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.44 J	0.59 J	0.4 J
0.18 U	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U
0.18 U	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U
0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U	0.22 U	0.22 U
0.33 U	0.33 U	0.33 U	0.33 U	0.33 UJ	0.33 U	0.33 U	0.33 U	0.33 U
0.24 U	0.24 U	0.24 U	0.24 U	0.24 UJ	0.24 U	0.24 U	0.24 U	0.24 U
0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U
0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U	0.22 U	0.22 U
0.37 U	0.37 U	0.37 U	0.37 U	0.37 UJ	0.37 U	0.37 U	0.37 U	0.37 U

Table 2. Summary of Volatile Organic Compounds in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U	0.22 U	0.22 U
0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U	0.22 U	0.22 U
0.26 U	0.26 U	0.26 U	0.26 U	0.26 UJ	0.26 U	0.26 U	0.26 U	0.26 U
0.16 U	0.16 U	0.16 U	0.16 U	0.16 UJ	0.16 U	0.16 U	0.16 U	0.16 U
0.26 U	0.26 U	0.26 U	0.26 U	0.26 UJ	0.26 U	0.26 U	0.26 U	0.26 U
0.15 U	0.15 U	0.15 U	0.15 U	0.15 UJ	0.15 U	0.15 U	0.15 U	0.15 U
0.14 UJ	0.14 UJ	0.14 U	0.14 U	0.14 UJ	0.14 U	0.14 U	0.14 U	0.14 U
0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.4 J	0.47 J	0.3 U
0.19 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
0.32 U	0.32 U	0.32 U	0.32 U	0.32 UJ	0.32 U	0.32 U	0.32 U	0.32 U
0.58 U	0.58 U	0.58 U	0.58 U	0.58 UJ	0.58 U	0.58 U	0.58 U	0.58 U
0.13 U	0.13 U	0.13 U	0.13 U	0.13 UJ	0.13 U	0.13 U	0.13 U	0.13 U
0.22 UJ	0.22 UJ	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U	0.22 U	0.22 U
54	42	37	35	35 J-	73	100	82	87
0.28 U	0.28 U	0.28 U	0.28 U	0.74 J-	0.6 J	2	1.9 J	0.62 J
0.32 U	0.32 U	0.32 U	0.32 U	0.44 J-	0.32 U	1.3	0.91 J	0.32 U
0.23 J	0.2 J	0.17 U	0.17 U	0.17 UJ	0.17 U	0.17 U	0.4 J	0.17 U
0.36 U	0.36 U	0.36 U	0.36 U	0.36 UJ	0.36 U	0.36 U	0.36 U	0.36 U
0.25 U	0.25 U	0.25 U	0.25 U	0.36 J-	0.45 J	0.52 J	0.99 J	0.97 J
0.18 U	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U
0.19 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U	0.22 U	0.22 U
0.15 U	0.15 U	0.15 U	0.15 U	0.15 UJ	0.15 U	0.15 U	0.15 U	0.15 U
0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U

Table 2. Summary of Volatile Organic Compounds in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

CFPR01-GF-04	CFPR01-SS
3/10/2017	3/9/2017
N	N
0.28 U	0.28 U
0.19 U	0.19 U
0.34 U	0.34 U
0.08 U	0.08 U
0.24 U	0.24 U
0.34 U	0.34 U
0.35 U	0.35 U
0.27 U	0.27 U
0.23 U	0.23 U
0.22 U	0.22 U
0.25 U	0.25 U
0.18 U	0.18 U
0.33 U	0.33 U
0.33 U	0.33 U
2.6 J	2.2 U
0.72 U	0.72 U
1 J	0.63 U
22	15
0.19 U	0.21 J
0.18 U	0.18 U
0.18 U	0.18 U
0.22 U	0.22 U
0.33 U	0.33 U
0.24 U	0.24 U
0.3 U	0.3 U
0.22 U	0.22 U
0.37 U	0.37 U

Table 2. Summary of Volatile Organic Compounds in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

0.22 U	0.22 U
0.22 U	0.22 U
0.26 U	0.26 U
0.16 U	0.16 U
0.26 U	0.26 U
0.15 U	0.15 U
0.14 U	0.14 U
0.3 U	0.3 U
0.19 U	0.19 U
0.32 U	0.32 U
0.58 U	0.58 U
0.13 U	0.13 U
0.22 U	0.22 U
37	73
0.28 U	0.32 J
0.32 U	0.32 U
0.17 U	0.23 J
0.36 U	0.36 U
0.25 U	0.25 U
0.18 U	0.18 U
0.19 U	0.19 U
0.22 U	0.22 U
0.15 U	0.15 U
0.2 U	0.2 U

Table 3. Summary of Metals in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

Analyte	Sample Designation:			CFBR-01	CFBR-01	CFBR-02	CFBR-03	CFBR-CS-01	CFBR-CS-02	CFPR01-BF-01	CFPR01-BF-02
	Sample Date:			3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/9/2017	3/9/2017
	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit	FD	N	N	N	N	N	N	N
Aluminum	--	2000	ug/l	457	504	253	461	326	406	1350	7800
Antimony	6	0.78	ug/l	1.9 J	2.1	2.5	14.7	5.4	3.4	2.3	2.3
Arsenic	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	0.74 J	0.64 U	0.64 U	0.92 J	0.64 U
Barium	2000	380	ug/l	460	389	170	59.2	111	175	30.4	16.5
Beryllium	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U				
Cadmium	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U				
Calcium	--	--	ug/l	321000	314000	270000	191000	215000	257000	54500	56600
Chromium	100	--	ug/l	23.2	24.4	36.4	44.6	21.3	40.4	13.1	11.3
Cobalt	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	3.7 J	1.3 U	1.3 U	1.3 U	1.3 U
Copper	1300	80	ug/l	3.6 J	4.2	12.4	32	164	126	1.6 J	1.5 J
Iron	--	1400	ug/l	42.4 U	52.4 J	177	194	11100	1510	481	42.4 U
Lead	15	15	ug/l	2.2	1.9	1.2	1.4	625	2.6	0.38 U	0.38 U
Magnesium	--	--	ug/l	63.6 U	91.3 J	88.8 J	143 J	108 J	99.1 J	468	129 J
Manganese	--	--	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	3.5 J	2.5 U	14.1	2.5 U
Mercury	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U				
Nickel	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 J	5.6	1.4 U	1.4 U	1.4 U
Potassium	--	--	ug/l	33200	33600	31300	30300	43800	76900	9000	8690
Selenium	50	10	ug/l	0.73 U	0.73 U	0.85 J	0.81 J				
Silver	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U				
Sodium	--	--	ug/l	32500	33300	34200	54200	51800	24700	47900	66700
Thallium	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U				
Vanadium	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	5.6	1.9 U	1.9 U	22.1	14.4
Zinc	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	8 J	7 U

J - Estimated value

J+ - Estimated value, high bias

U - Indicates that the compound was analyzed for but not detected

Table 3. Summary of Metals in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

FD - Duplicate

EPA - Environmental Protection Agency

RSL - Regional Screening Levels

ug/l - Micrograms per Liter

Bold data indicates that parameter was detected above the EPA Residential Soil RSLs

Shaded data indicates that parameter was detected above the EPA Industrial Soil RSLs

Table 3. Summary of Metals in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

CFPR01-BF-03	CFPR01-BF-04	CFPR01-BW-01	CFPR01-BW-04	CFPR01-GF-01	CFPR01-GF-02	CFPR01-GF-03	CFPR01-GF-04	CFPR01-SS
3/9/2017	3/9/2017	3/10/2017	3/9/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/9/2017
N	N	N	N	N	N	N	N	N
657	168	495	806	18800	24600	47800	9220	5210
3	2.6	2.6	1.7 J	2.6	2.6	1.6 J	2.1	2.2
0.64 U	0.64 U	1.5 J	0.64 U	0.64 J	0.64 U	0.64 U	0.64 U	0.64 J
19.8	16.7	26.2	57.9	30	41.2	51.7	174	37.2
0.24 U	0.24 U							
0.71 U	0.71 U							
40600	41700	32700	123000	58100	64400	75300	145000	79800
10.8	9.4	41.7	39.1	40.5	35.4	38.1	27.4	13.5
1.3 U	1.3 U	5.3	1.3 U	1.3 U				
1.4 U	1.4 U	1.7 J	1.4 U	2.7 J	2.3 J	1.7 J	1.4 J	1.4 U
42.4 U	56.2 J	2590	63 J	279	156	42.4 U	62 J	73.2 J
0.38 U	0.38 U	0.38 U	0.38 U	0.54 J	0.38 U	0.38 U	0.38 U	0.38 U
310	350	264	142 J	326	274	106 J	121 J	242
2.5 U	2.5 U	4 J	2.5 U	7.2 J	5.2 J	2.5 U	2.5 U	2.5 U
0.17 U	0.17 U							
1.4 U	1.4 U	1.4 U	1.4 U	1.7 J	1.4 U	1.4 U	1.4 U	1.4 U
9410	11200	19800	10900	16200	5730	5970	12500	11900
0.73 U	0.73 U	0.97 J	0.73 U	1.4 J	1.3 J	1.1 J	1.1 J	0.73 U
1.3 U	1.3 U							
51500	35400	115000	8350	66700	65500	75200	46800	41800
0.26 U	0.26 U							
21.2	30.5	47	13.2	11.3	7.5	7.4	4.1	17.1
7 U	7 U	7 U	7 U	7.5 J	7 U	7 U	7 U	7 U

Table 3. Summary of Metals in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

Table 4. Summary of General Chemistry in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

Sample Designation:			CFBR-01	CFBR-01	CFBR-02	CFBR-03	CFBR-CS-01	CFBR-CS-02	CFPR01-BF-01	CFPR01-BF-02	
Sample Date:			3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/9/2017	3/9/2017	
Sample Type:			FD	N	N	N	N	N	N	N	
Analyte	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit								
Cyanide, Free	200	0.15	ug/l	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	
Fluoride	4000	80	ug/l	7080 J	8910 J	7490 J	18600 J	10500 J	3670 J+	23800 J	57500 J

J - Estimated value

J+ - Estimated value, high bias

U - Indicates that the compound was analyzed for but not detected

FD - Duplicate

EPA - Environmental Protection Agency

RSL - Regional Screening Levels

ug/l - Micrograms per Liter

Bold data indicates that parameter was detected above the EPA Residential Soil RSLs

Shaded data indicates that parameter was detected above the EPA Industrial Soil RSLs

Table 4. Summary of General Chemistry in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

CFPR01-BF-03	CFPR01-BF-04	CFPR01-BW-01	CFPR01-BW-04	CFPR01-GF-01	CFPR01-GF-02	CFPR01-GF-03	CFPR01-GF-04	CFPR01-SS
3/9/2017	3/9/2017	3/10/2017	3/9/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/9/2017
N	N	N	N	N	N	N	N	N
1.5 U	1.5 U	5.8	1.5 U					
38200 J	22800 J	11200 J	2040 J+	34900 J	37200 J	45000 J	25600 J	58500 J

Table 5. Summary of Polychlorinated Biphenyl in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

Analyte	Sample Designation:			CFBR-01	CFBR-01	CFBR-02	CFBR-03	CFBR-CS-01	CFBR-CS-02	CFPR01-BF-01
	Sample Date:			3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/9/2017
	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit	FD	N	N	N	N	N	N
Aroclor 1016	--	0.14	ug/l	0.098 U	0.098 U	0.098 U				
Aroclor 1221	--	0.0047	ug/l	0.098 U	0.098 U	0.098 U				
Aroclor 1232	--	0.0047	ug/l	0.098 U	0.098 U	0.098 U				
Aroclor 1242	--	0.0078	ug/l	0.098 U	0.098 U	0.098 U				
Aroclor 1248	--	0.0078	ug/l	0.098 U	0.098 U	0.098 U				
Aroclor 1254	--	0.0078	ug/l	0.084 U	0.084 U	0.084 U				
Aroclor 1260	--	0.0078	ug/l	0.084 U	0.084 U	0.084 U				
Aroclor 1268	--	--	ug/l	0.084 U	0.084 U	0.084 U				
Aroclor-1262	--	--	ug/l	0.084 U	0.084 U	0.084 U				
Polychlorinated biphenyls, Total	--	--	ug/l	0.098 U	0.098 U	0.098 U				

J - Estimated value

J+ - Estimated value, high bias

U - Indicates that the compound was analyzed for but not detected

FD - Duplicate

EPA - Environmental Protection Agency

RSL - Regional Screening Levels

ug/l - Micrograms per Liter

Bold data indicates that parameter was detected above the EPA Residential Soil RSLs

Shaded data indicates that parameter was detected above the EPA Industrial Soil RSLs

Table 5. Summary of Polychlorinated Biphenyl in Concrete Leachate
Columbia Falls Aluminum Company, LLC, 2000 Aluminum Drive, Columbia Falls, MT

DRAFT

CFPR01-BF-02	CFPR01-BF-03	CFPR01-BF-04	CFPR01-BW-01	CFPR01-BW-04	CFPR01-GF-01	CFPR01-GF-02	CFPR01-GF-03	CFPR01-GF-04	CFPR01-SS
3/9/2017	3/9/2017	3/9/2017	3/10/2017	3/9/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/9/2017
N	N	N	N	N	N	N	N	N	N
0.098 U	0.098 U								
0.098 U	0.098 U								
0.098 U	0.098 U								
0.098 U	0.098 U								
0.098 U	0.098 U								
0.098 U	0.098 U								
0.084 U	0.084 U								
0.084 U	0.084 U								
0.084 U	0.084 U								
0.084 U	0.084 U								
0.098 U	0.098 U								